



Sensitive Program to Develop Self-Regulation for Kindergarten

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This study focuses on children's self-regulated learning, which is a crucial aspect of their education. It seeks to enhance the child's capacity for self-control as well as the way he organizes his information, actions, and emotions to achieve his objectives. Access to various pedagogies and studies that addressed his topic were employed to meet the research goal. In the second semester of 2022–2023, a basic sample of thirty-two male and female students between the ages of five and six were selected from the Mohamed Farid School in the Alexandria Governorate. A measure of the skills that a child should learn in kindergarten was prepared and codified, and it was then applied to the intended sample. A curriculum of educational exercises that the research sample's kids participated in was also created, considering the features and attributes of kindergarteners. The results of the analysis of variance show that ($T=515.20$) Function at the 0.05 significance level, suggesting that pre- and post-measurement variations are fundamental in Self-regulation is favourable to the post-measurement, demonstrating how well the integrated curricular program has helped kindergarteners build their capacity for self-regulation. By computing the value of (μ^2), which came to 0.86, the software had a positive effect on the research sample's ability to regulate their behaviours.

Keywords: self-regulation, kindergarten sensitive, program, early childhood, learning

INTRODUCTION

Due to its reliance on the senses—the entranceway to knowledge—early childhood is one of the most significant periods of a person's life and has the greatest influence on his or her future. For this reason, this research is crucial. It's a formative period when the child develops his interactive behaviours and lays the groundwork for his personality. Additionally, it is during this stage that most of his future traits and abilities as well as his most significant potential emerge. It is necessary and vital for us, in general, and our children, in particular, to develop organizational skills in this fast-paced society that is even eager for cognitive performance. As a result, forming good habits that are in line with historical evidence and having your family and school

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emphasize them helps them become behaviours over time. A child's leader, and in essence, it transforms into abilities that develop with him until they play a significant role in his personality style, which is characterized by these abilities. (Houseman, Denham, and Cabral, 2018; Nahil Abdallah, & Alkilani, 2023). One of the most crucial talents that must be cultivated is the ability to regulate oneself. This is not a straightforward task, and it depends on a variety of circumstances.

The capacity to adapt ideas, actions, and feelings to the ever-changing needs of the environment is known as self-regulation. This can help kids successfully interact in social contexts, which makes it vital in the school setting (Nigg, 2017; Woodward, Morris, & Healey, 2017; Agustin, et al, 2021).

Additionally, learning preparedness, learning behaviours, and learners' capacity for learning strategies are all integrated into the multifaceted study idea of self-organization. This shows the expected efforts of the learners as well as their level of learning approach. Students and their capacity to apply learning strategies. The reasons for learners' self-organization vary throughout theoretical schools (Yonghua Peng, 2017; Mann, Hund, McKinnis, & Romania, 2017). One of the most important developmental tasks for young children is learning to regulate their own emotions. Self-regulation in general refers to the capacity to control one's thoughts, actions, and feelings to accomplish goal-directed behaviours. (Brandun & Timmons, 2021; & Tentolouris, 2022). The teacher needs to take into account the following steps for the self-regulation skill: **The first** step is to get the kids interested in the task that has been given to them; **the second** is to keep them interested and increase their interest in it; **the third** is for the task to end up being successful and interesting; the kids' self-regulation skills need to mean something to them; and the more time the kids spend working on tasks that are appropriate for them, the more likely it is that they will learn effectively. (Baumeister & Vohsm, 2004; Thomas, 2009. & Alwaely, et al., 2023, Aaron A & et al, 2024) Biological, emotional, cognitive, social, and positive domains are the key areas of concentration for self-regulation. Given the distinction between self-regulation and self-control—self-control being an independent concept—the child's inability to manage his behaviour stems from his lack of composure and concentration. For kids to be able to control their behaviours, teachers and other adults must assist them stay calm and lower their stress levels (Werner, & Malivalaya, 2019, Violeta, Buza; Arbërore, Bicaaj, 2022).

Teachers can help students develop self-regulation skills by helping them recognize the sources of stress, finding ways to lessen it, and considering how to teach them how to alleviate stress on their own to help them relax (Scholer, Murayama & Fujita 2018; McCoy, 2019) self-regulation skills as persistence and emotional control in all social and constructive activities, and it described them as behavioural factors connected to early children's learning and development. These abilities also help the youngster acquire valuable values and have a favourable correlation with the child's capacity for adaptation. (Mann; Hund; (Hesson & Roman 2017). Early childhood effective regulation in children is likely to differ based on the availability or lack of sensory supports. (McCoy, 2019; Florez, 2016 & Velayudhan, 2013). The educational research and studies have shown that, to encourage children to finish the tasks that are assigned to them independently, modern educational trends require that there be educational

programs and activities in kindergartens that center around a variety of interconnected sensory areas. These activities should integrate language, science, social studies, sports, music, art, and movement. They arrange themselves to complete these assignments by means of programs that are founded on helping kids acquire the ability to regulate their own behaviour, employing engaging and stimulating techniques. This demonstrates why it is so important to carry out this research for our Egyptian youngsters, whose curricula lack any programs that help them develop these skills.

Research Problem

Based on findings from some earlier studies and research related to this study, including Bronson, 2000; Bobrova & Leong, 2008; & et al.2016; Velayudhan, 2013; Timmons, Pelletier & Corter, 2016; Braund & Timmons, 2021 & Violeta, Buza; Arbërore, Bicaj, 2022, Nahil Abdallah, & Alkilani, 2023, Aaron A & et al, 2024 et al. which stressed the significance of developing self-regulation skills in the kindergarten stage because of their potential to boost children's motivation for achievement as well as their future effects on the subsequent educational stages and their ability to achieve. Children and the relationship between teaching them to read and write, as well as providing them with self-assurance and behavioural control. It was discovered from the writers' expertise, study of kindergarten curricula, and observation of Egyptian children that most of the time, youngsters do not know what self-regulation means and do not exhibit it in their behaviour or life plans. They show little attention and seem bored. Social media networks have mostly kept kids away from appropriate engagement, which has negatively impacted their behaviour. Furthermore, in the absence of the role played by the family and the school, which do not sufficiently attend to organizing children's selves and making them aware of the importance of this in the stages of their lives, they are dependent on a multitude of requirements generally and are unable to give priority to priorities. Additionally, as the writers monitored the advancement of the educational process and oversaw pupils receiving practical education and field training, it became evident that the kids lacked the organizational skills necessary to follow instructions and stay on target. Additionally, they lack a management approach that would assist them get past internal or external barriers. to remain motivated and focused on the work at hand. In addition to the teacher's poor self-regulation abilities in guiding the students while they complete the chores, some kids are unwilling to participate in the activities, and if they do, they finish them later than expected and show distracted attention. Thus, the goal of the current study was to attempt to lessen how serious the issue is. This decline in the crucial ability to organize oneself, and its enhancement through a sensory program aimed at educating aware, independent generations to carry out activities with proficiency and excellence in life (refer to Appendix 1).To tackle the deficiency in the kindergarten student's self-regulation skill set, the study provides an answer to the following query: - How successful is the program designed to enhance the kindergarten student's self-regulation skills?

Literature Review

The tasks covered in the research and self-regulation abilities are explained in the lines that follow:

Let us first define self-regulation: The child's ability to organize his information, actions, and emotions to accomplish his objectives is referred to as self-regulation. It also refers to how well kids participate in their learning process through positive behaviours, motivation, and metacognition. (Zimmerman, 2002) Through the process of self-regulation, students can guide and oversee their own education. Among the traits that demonstrate self-regulation in the learning process are a) a high degree of achievement regarding the learning process, as organized learners realize many strategies that contribute to completing the tasks assigned to them; and b) setting goals and finding motivation to achieve those goals. Self-regulated learners can manage their own learning experiences. b) Their observation of the learning process and provision of feedback on it. c) Their ongoing adaptability to change their learning behaviours in response to the demands of the tasks and the learning environment. In (Walters, 2003 & Maya, Fonny, & Syed Ali, 2022),

Self-regulation is defined as the process that improves children's motivation for their goals, organizational abilities, and effective engagement in learning through a variety of approaches (Shin, 1997 & Rademacher & Koglin 2019). Self-regulation also includes coming up with concepts and using self-planning to change emotions and behaviours. to fulfill learning goals, (Robotize, 2002). It also comprises (Braund & Timmons, 2021; Sezgin, 2016.) on an additional level. Self-regulation is the capacity to focus attention, focus and regulate emotions, control, and regulate behaviours, adapt, or increase emotional arousal, and comply. Leaders can organize, concentrate, pay attention to, and carry out assigned tasks. The following behaviours are summarized by the authors as signs that children are capable of self-regulation:

- Executing a request or command. For instance, the child's capacity to comply with instructions from the teacher to begin eating, go outside to play in the yard, or gather toys.
- Depending on the situation, starting a behaviour, or refraining from it. For instance, being able to go up to the toy cabinet during unstructured playtime and select a Favorite toy, or being able to put down the toys when the teacher instructs them to do so.
- The appropriateness of a mechanical or verbal act's timing, force, and tempo. Example: A child's capacity to modify his voice intensity for a small group of people, his physical proximity to them, and the nature of the interaction—whether it be social or instructional.
- Delaying gratification of wishes. For instance, a child's capacity to delay his response in response to an alluring object.
- Acting in a socially acceptable manner. Examples of this include the child's capacity to play games with other kids and to wait patiently for his turn in conversations or games.

- Applying force in response to a feeling based on emotion. For instance: A youngster must learn to control his physical aggression, such as sobbing and throwing fits, when he is upset. Finegood, Blair, and Raver (2016).

- Taking action to fulfill an objective. For instance, the child's capacity to ignore the noise made by his peers during group play and concentrate on completing the task given to him.

By indicating that child learners can control their behaviours through their perceptions and beliefs about the consequences of these behaviours, and that self-regulation processes contribute to bringing about changes that speak behaviour, Bandura is credited with emphasizing self-regulation processes in children through his theory of social cognitive learning (Bandura, 1986).

Qualities of self-control

Initially, "Why?" It speaks to kids' drive for self-control and their aptitude for selecting and contributing to tasks successfully. Second: What about "How"? This dimension pertains to the way in which learner children organize themselves, and it canters on granting them the autonomy to select a strategy that aligns with the task's requirements. Step three, "When"? This relates to the temporal aspect of learning self-regulation, and people who possess self-regulation are better at managing their time than people who lack it. Step four: "What?" It is associated with children's ability to self-regulate to choose, adjust, alter, and adjust their answers to meet the demands of the task. Step five: "Where?" It describes how students set up their classroom so they can accomplish a variety of tasks. (Zimmerman., 2000; Bronson, 2000 & Blair, Raver and Finegood, 2016 & Alfiky, 2022)

The program to foster curiosity, draw attention to the task, and select activities to develop self-regulation skills in this research was built using a few strategies, including self-Efficacy for Learning and Performance, Extrinsic Goal Orientation, and Intrinsic Goal Orientation. Youngsters who possess self-control exhibit distinct differences from their classmates. And keeping track of whether they succeed or fail in accomplishing these objectives, as well as their capacity to learn about the activity at hand and use that knowledge later. With experience and training, they develop the performance mechanism and eventually become self-regulating. (Greenberg, 2012; Robinson, Allen, Howard, 2020; Yong-Jik, Davis & Yue, L. 2023).

Based on the three traits can be distinguished and fostered via structured programs: first, the child can ascertain the objectives of the tasks given to him; second, the child is committed to finishing the tasks given to him; and third, the child is aware of the steps involved in finishing the task in order. There is no significant indication that these phases are hierarchical or sequential; instead, they are typically completed in the chronological sequence in which they occur. As learners progress through activities, monitoring, control, and response stay synchronized and successful, like most learning self-organization models. Goals and plans are continuously updated based on input from feedback. Processes for reaction, control, and monitoring. (Houseman, Denham, &

Cabral, 2018). The following lists a few research on self-regulation that have been well-informed and fit in with the goals of the current study:

- According to R0botize's (2002) research, teachers who supported their students' self-regulation and perseverance through to success stages saw an increase in their students' self-efficacy and, consequently, in their ability to pronounce words correctly.
- Bekaert & Como (2005) discovered that children who received the intervention for six months improved more quickly than those who did not, in terms of handwriting quality, neat handwriting, and writing speed.
- Bobrova & Leong (2008) discovered that a child's ability to exercise self-control drives him to accomplish his objectives. The study highlighted the importance of the teacher in this and determined that three things are necessary for success: moderate-intensity goals, goal orientation, and goal-achievement determination. Using several techniques, paying attention, imitating, taking the initiative, and enjoying the process of trying and succeeding.
- Tracy & Graham (2009) used two research groups—an experimental group and a control group—to develop self-regulation techniques and determine their effects on students' learning. The experimental group got After receiving instruction in self-organization techniques, story writing, and planning techniques, the experimental group was able to produce longer and more coherent stories.

Morrison, Ponitz, & McClelland (2010), concluded that knowledge of the event, its structure, and the different cues provided to the kid, which aid in their performance, influences the child's capacity to plan and carry out plans.

• Sezgin (2016), them in the classroom, and how self-regulation abilities relate to this. The findings showed that children's favourable interactions with their teachers are associated with improved cognitive control, obedience to commands, task performance, and According to his research, there are several elements that support kids' development of self-control, such as their pleasant social interactions with peers and teachers during assignment completion.

Kurki, Järvenoja, Javel & Mykkänen (2016), Funa, Ricafort & Jetomo, (2024) concluded that children's teachers play a critical and crucial role in assisting their development of fundamental self-regulation skills. Daily experiences are essential for children's development and self-regulation because they provide them with opportunities to practice self-regulation and allow teachers to observe a range of sensory activities. These activities are presented to students every day during the school day to assist them in learning self-regulation. The findings of Gomerčić, Lj. & Leipsic Vodopivec, J. (2022) demonstrated that planning capacity differs depending on cognitive ability. Children with average ability showed improvement in their planning performance regardless of the ability of their partners, and children with high ability produced excellent results whether they worked alone or with children of the same ability. Additionally, the children working together planned in more effective ways than the children planning alone. either below or equal to their skills.

Based on the research mentioned above, most investigations have verified the following:

a- Children learn self-regulation through their everyday experiences, and teachers play a significant role in helping them develop these fundamental abilities. b: The requirement that kids take part in organizing the activities that are offered to them and receive training to accomplish the objectives of everyday tasks, children must test alternatives and discuss strategies. They also need to pay attention to educational scenarios and sensory activities that highlight the importance of time and how it should be used to accomplish tasks. C: Organizing oneself is crucial to completing the assignments given to children. Because it improves their ability to plan, activities must be offered that help the youngster transition from being a consumer of knowledge to a producer of it'd: Encouraging children to prioritize the everyday activities they wish to complete will help them learn self-regulation. A timer is essential for the child as it will teach him the fundamentals of managing his time. In addition to numerous studies like Zimmerman (2002), the research presented in the preceding lines includes some of the literature that defines self-regulation, theories that address it, strategies and methods that develop it, its impact on student learning, and the significance of the role of the children's teacher in helping them develop their skills for self-regulation. (Zimmerman, 2002; Rohotize, 2002; Shapiro, 2004; Bobrova & Leong 2008; Tracy & Graham 2009; Hadwin, & Oshige, 2011; Sezgin, 2016; Bobrova & Leong, 2008; Kurki, Avanija, Järvelä & Mykkänen, 2016; Vassilev, Hewett, Ehrich et al. 2021), Robson, Allen, and Howard, 2020; Braund & Timmons, 2021; Gomerčić, & Leipsic, 2022).

With an emphasis on the value of this skill and how lacking it is in Egyptian kindergarten students, this research uses a variety of sensory activities to build the children's self-skills and values, which are positively correlated with their capacity to adapt and persevere in the face of adversity and reach their objectives. Research hypotheses: Based on the information given, the following formulation of research.

Hypotheses:

From the above, the research hypotheses can be formulated as follows:

H1.: "Is it possible to prepare a program based on diverse educational activities in developing skills related to self-regulation in Kindergarten?"

H2.: "There are statistically significant differences between the averages of the degrees of pre-measurement and post-measurement in self-regulation in favor of post-measurement".

H3.: "There were no statistically significant differences between the averages of the telemetry- scores and the post- measurement on the self-organization skills scale".

H4.: "The program has a great impact on the development of self-regulation." Skill for a pre-school child.

METHOD

The experimental method was used due to its suitability to the nature of the research, as it aimed to develop self-regulation skills among its sample. The experimental method was used due to its suitability to the nature of the research, as it aimed to develop self-regulation skills among its sample; It is based on a one-group experimental design, as in this type of design the research uses one group, where the scale is applied to the group before applying the program (preliminary), then the program is applied with the aim of developing self-regulation skills among the sample members, then apply the scale to determine its effectiveness. The scale was applied to a pilot sample of (45) children to determine the extent of the validity and reliability of the scale on a sample from the “Bulkeley” School in the Alexandria Governorate, and a purposive sample was chosen from the “Mohamed Farid” School in the Alexandria Governorate as a primary sample of (32) male and female children, which included (20) males. (12) females, aged 5-6 years, from the original community representing the kindergarten in Alexandria Governorate.

Research tools

A measure of self-regulation skills among kindergarten children: The educational materials included a program of sensory educational activities to develop the self-regulation skills of the kindergarten child. Codification of the research tool.

The reliability

a- (Reviewers reliability): The scale was presented to a group of arbitrators in its initial form to (10) arbitrators who are specialists in curricula, teaching methods, and psychology, including professors and assistant professors in colleges of education and kindergartens, with the aim of: Ensuring the appropriateness of the scale’s tasks, and amending or excluding some of them. Considering the opinions of the arbitrators, some amendments were made to the scale to prepare it in its final form. They agreed that the scale is appropriate for the purpose for which it was developed.

b- The internal structure of b-vocal reliability: After applying the scale, the consistency of the scale was internally verified by calculating the correlation between the scores of each singular number in the scale and the dimensions to which the singular number belongs, as well as the correlation between each dimension and the total score of the scale. The initial form (18 singular) of the scale on the survey sample as shown in Table-1.

Table 1

Correlation coefficients between the degree of each vocabulary of self-regulation skills (N=45)

Self-regulation							
No.	Correlation coefficients	No.	Correlation coefficients	No.	Correlation coefficients	No.	Correlation coefficients
1	0.536**	2	0.604**	3	0.622**	4	0.611**
5	0.513**	6	0.575**				

From Table 1, the correlation coefficient of the scale with high statistical significance can depend on the authenticity of the measured value.

c-Rreliability by Mann-Whitney U test: As shown in table 2, independent couples were tested using the" Mann Whitney" U test to understand the differences between the highest and lowest quadrants on the scale as shown in Table-2.

Table 2

Mean orders, sum of orders, Z-value and the significance values of the differences between the upper and lower quartiles

	N	Mean's orders	Sum of orders	Z- value	Significance level
upper quartiles	7	4.00	28.00	3.276-	0.001
the lower quartiles	8	11.50	92.00		

Validity

a- **Retest method:** The retest method was used to calculate the scale's validity coefficient, by calculating the correlation coefficient between the children's scores in the first application and their scores in the second application with an interval of two weeks between the two applications. Table-3 shows the scale's validity coefficient value for self-regulation.

Table 3

Scale validity coefficient value for self-regulation

Validity Coefficient	The Scale
self-regulation	0.812**

**Function at 0.01 level

From Table (3), reliability coefficients for the self-regulation skill are high, which calls for accepting the reliability of the scale.

b- Using the Alpha Cronbach equation: Table-4 shows the reliability coefficients of the scale for self-regulation.

Table 4

Scale validity coefficients and dimensions by Cronbach method

Validity Coefficient	The Scale
self-regulation	0.801**

**Function at 0.01 level

It is obvious to notice that validity coefficient for the self-regulation skill are high, which calls for accepting the **validity** of the scale. From the above, it is possible to trust the validity and reliability of the scale that was prepared, and thus it was possible to apply the scale to the basic research sample.

Scale time: By applying the scale to a survey sample to arrive at an estimate of the time the scale takes, the time was calculated by calculating the average performance time between the fastest and slowest child, which amounted to (30) minutes as an appropriate time to perform the scale.

Creating program to develop the self-regulation skill of pre-school children.

A program of sensory activities was prepared to develop the self-regulation skill of a pre-school child in the age group (5-6 years), which took into account the characteristics of children at this stage, their inclinations, needs, abilities and potentials, with the help of many references and previous studies related to how to develop the skill: (Hadwin, Sezgin, E. 2016; McCoy, 2019; Robson, Allen & Howard. 2020; Gomerčić. & Leipsic, 2022; Yong-Jik, Davis, R., & Yue, L. 2023)

Program Philosophy

Given that the brain may change and grow, the program's philosophy is predicated on one of the tenets of psychology education: that humans are capable of self-growth. The brain interacts with its surroundings to grow and become engaged. It is developed and activated by the rich surroundings. The program's design philosophy also draws from the contributions of Piaget and Vygotsky's theory of cognitive construction as well as Maria Montessori's ideas. According to this theory, the human mind develops to its full potential in an environment that is rich and stimulating, (Shaffer, 2008; Hadwin, & Oshige, 2011; Sezgin, 2016 & World Health Organization, United Nations Children's Fund; World Bank Group, 2018).

Laying the groundwork for the activities of the programme

The kindergarten student relies on their senses because they are the portals to knowledge. Learning at this stage occurs through activity and interaction, and teachers focus primarily on guidance and evaluation. Individual differences in the activities offered to the students are taken into consideration, allowing each child to participate in them according to his or her abilities and developmental pace. The suggested program, in which the child's learning depends on real-world situations, considers the environment, the order and integration of the concepts presented in the program, the balance between the individual and group activities presented, and the variation in the use of different strategies that contributes to the diversity of thinking among kindergarten students. a range of techniques for supporting and improving kids' performance in educational activities while offering a kid-friendly, safe learning environment.

Approach to assessing practical tasks.

The evaluation procedure seeks to ascertain if the program is successful or unsuccessful in accomplishing the overarching objectives for which it was designed. It is a direct evaluation that follows each task and includes the structural evaluation of the tasks, which consists of questions posed to the kids following each task and a discussion or presentation between them and the teacher. A post-measurement using a pre-schooler's self-regulation skill measure, which the research addressed in detail, and which attempts to ascertain the availability of the dimensions of this skill among kindergarten children, is the other final evaluation. Some cards are used, along with questions posed through them, as shown in Scheme 1.

Determine task objectives		Focus on completing tasks		Understand the order of tasks	
Language activities	Define the letter A	Language activities	Let's complete the words	Language activities	Let's talk.
Define and colour		Complete & colour	Art activities	draw a flower	Art activities
Who am I?	Music activities	Soso game	Music activities	I am the wind	Music activities
Naughty balls	Sports activities	where is the gift?	Sports activities	network game	Sports activities
Birds and Hunters	Dramatic activities	The sad judge	Dramatic activities	Answer rabbit	Dramatic activities
the stairs & snake	Sports activities	recognizes the objects	Sports activities	build a tower	Sports activities
Cleaning agent	social activities	carpenter	social activities	postman	social activities

Scheme 1
Illustration of the program’s self-regulation activities

FINDINGS

H1.: “Is it possible to prepare a program based on diverse educational activities in developing skills related to self-regulation in kindergarten? From the above steps in preparing the program and designing various activities to give the child the skill of self-regulation (refer to appendix 3) to the program, the research has achieved the validity of its first hypothesis, which states:

H2.: “There are statistically significant differences between the average the degrees of the mean(m) and standard deviation(s) of pre-measurement and post-measurement in self- regulation skills, in favour of post-measurement” To verify the validity of the second hypothesis of the research the significance of the differences was calculated, using "T-Test" as shown in Table-5.

Table 5
The significance of the differences between the averages of the degrees of the mean(m) and standard deviation(s) of pre-measurement and post-measurement in self- regulation skills.

The Measurements	Pre-measurement		Post-measurement		T -value	Significance level
	m	s	m	s		
self- regulation	11.27	2.24	14.97	2.28	20.515	0.001

N=32

It is clear from the above table that the values of (T=515.20) are significant at the 0.05 level, which indicates the existence of fundamental differences between pre-measurement and post-measurement in self- regulation in favour of post-measurement, and this indicates the effectiveness of the program in developing skills Self-regulation of the kindergarten child is shown in Figure 1.

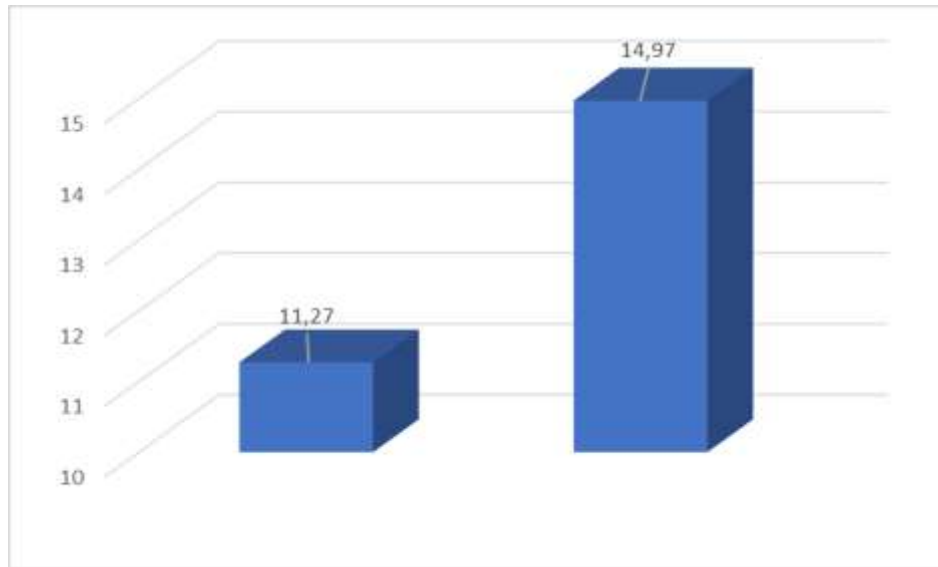


Figure 1

The significance of the differences between the averages of the degrees of pre-measurement and post-measurement of the task of self-organization

H3.: “There are no statistically significant differences between the averages of the degrees of the mean(m) and standard deviation(s) of post-measurement and following measurement in self- regulation skills. As the result, the research has verified the validity of its second hypothesis. The mean and standard deviations were calculated on the self-regulation skills scale, and the significance of the differences was calculated using "T-Test", as in Table-6.

Table 6

The significance of the differences between the averages of the degrees of post-measurement and following – measurement. On the scale of self-regulation skills

The Measurements	Post -measurement		tracking -measurement		T -value	Significance level
	m	s	m	s		
self- regulation	14.97	2.28	14.57	2.21	1.252	Non-Significance

It is clear from the previous table that the T-value is a function, which indicates that there are no substantial differences between the dimensional measurement and the following measurement on the scale of self-regulation skills, which indicates the continuity of the effectiveness of the program in developing self-regulation skills in the kindergarten.

H4.: “The program has a great impact on the development of self-regulation skill in the kindergarten.”, to verify the validity of the fourth hypothesis, is calculated in table 7 (μ 2) the value.

Table 7
The value of (μ_2)

The measurement	T- value	(2μ)
self-regulation	20.515	0.94

It is clear from the previous table that the value of (μ_2) is large, which indicates the high size of the impact created by the program, falls between 86.0 and 94.0, and this indicates that there is a significant impact of the program on the dimensions of self-regulation skills.

DISCUSSION

According to the present research findings, the approach attempts to help kindergarten students develop their capacity for self-regulation.

As previously said, task-oriented skill development is shown by the application findings of the Tribal and Dimensional Self-Regulation skills scale. The results of the study resulted in statistically significant differences between the averages of the pre- and post-measurement scores on the scale of self-regulation skills in favour of post-measurement in each dimension of the scale. This is consistent with the second main hypothesis of the study, which also indicates that the results of the pre and post application self-regulation skill scale led to the development of self-regulation skills in the study sample, which is consistent with the development of self-regulation skills in the study sample. (Shapiro, 2004; Velayudhan, 2013; Blair, Raver and Finegood, 2016; Robson, Allen, & Howard, 2020; Gomerčić and Leipsic, 2022).

Self-regulation skills are skills of great importance to help children increase efficiency and their ability to achieve self-achievement, and they are also skills that kindergarten teachers must develop. The effectiveness of the scale's tasks is also due to them containing sensory activities that children like, including drawing, colouring, movement, and music. These activities are considered the closest entrances to the child's heart. The effectiveness of the method based on applying the scale also contributed to making the child an active, positive element within the educational situation. He practiced using his different senses to learn experiences with different practices, and integrate into and live with situations, which led to an improvement in his understanding and ability to discover skills within him. Also, the diversity of the choice of locations for implementing the scale tasks made the children have a strong desire to practice, as each task was presented and implemented in the appropriate place for it. The results agreed with the results of the study of (Hadwin & Oshige 2011), as the children who were urged to self-regulate themselves reached a stage of academic success, which led to the growth of their self-efficacy, and (Wolters, 2013), which indicated that there is Some of the factors that help children self-regulate include positive social participation with the teacher and peers, and that children have a desire to actively participate in tasks. (Ruohotie, 2002; McClelland & Cameron, 2012; McCoy, 2019; Camerota, Willoughby & Blair, 2020; Gomerčić, & Leipsic, 2022 & Yong-Jik, 2023) . The results included in this research confirm that the program has an acceptable effect in developing the self-regulation skill of kindergarteners. ", which is the main goal of this research.

CONCLUSION

- 1- Decision makers in educational policies must ensure that the early years have an accurate understanding of the literature on the concept of self-regulation.
- 2- The importance of including self-regulation skills in the official kindergarten curriculum and developing teaching programs and strategies to impart this skill to children, along with the importance of building a strong motivation to learn.
- 3- More work is needed to ensure that curriculum documents promote self-regulation skills and practices that are based on empirical findings.
- 4- Greater emphasis should be placed on shifting towards co-regulation, considering the context of the early years, where young students may be unable to independently regulate their behaviours, emotions and cognitive processes when starting formal education for the first time.
- 5- The importance of self-regulation including direct examples and activities of how Teachers facilitate joint organization between themselves and children and between children and their peers.
- 6- It is necessary for kindergarten programs to include sensory activities based on educational methods and games that are popular with children, and to implement those activities that promote self-regulated learning, and to ensure that these programs are linked to the interests and inclinations of children as motivations for the growth of their self-regulation skills.
- 7- Ways to encourage teachers to share how they assess self-regulation through standardized measures should be considered in their kindergarten programs to promote self-assessment as a widespread practice across kindergarten classrooms.
- 8- Ways to encourage teachers to share how they assess self-regulation through standardized measures should be considered in their kindergarten programs to promote self-assessment as a widespread practice across kindergarten classrooms.

REFERENCES

- Aaron A. Funa, Jhonner D. Ricafort, Frances Grace J. Jetomo, Nestor L. Lasala, Jr. (2024), Preschool Teacher Competence from the Perspective of Early Childhood Education and Care Student Teacher, *International Journal of Instruction*, 17(1), 323.
- Agustin, M., Puspita, R., Inten, D. & Setiyadi, B. (2021). Early Detection and Stimulation of Multiple Intelligences in Kindergarten. *International Journal of Instruction*. 14(4), 874-875.
- Alfiky, D., (2022). The Effect of a Whole Brain Teaching Based Instruction on Developing Number Competencies and Arithmetic Fluency in Kindergarten Children. *International Journal of Instruction*. 15(1), 674-675.
- Alwaely, S., Tapalova, O., Beretova, A. & Vlasova, S. (2023). The Impact of Moodle Learning Analytics on Students' Performance and Motivation. *International Journal of Instruction*. 16(4), 5-6.

- Bandura, A. (1986). Social foundation of thought and action: A social cognitive theory. Prentice-Hall.
- Bauer, I., & Baumeister, R. (2011). *Self-regulatory strength*. In K. Vohs & R. Baumeister (Eds.), *Handbook of self-regulation* (2nd ed., 64–82). The Guilford Press.
- Baumeister, F. & Vohs, D. (2004). *Handbook of self-regulation: Research, theory, and applications*. Guilford Press.
- Baumeister, F., & Vohs, D (2011). *Handbook of self-regulation: Research, theory, and applications* (2nd ed.). Guilford Press.
- Bekaert, M. & Corno, L. (2005). Self-regulation in the classroom: A perspective on assessment and intervention. *Applied Psychology and International Review*, 54(2), 199–231. <https://doi.org/10.1111/j.1464-0597.2005.00205.x>.
- Blair, C., Raver, C. & Finegood, D. (2016). “Self-regulation and developmental psychopathology: experiential canalization of brain and behaviour,” in *Developmental Psychopathology*, 3rd Ed, ed. D. Cicchetti (New York, NY: John Wiley & Sons), 484–522.
- Bobrova, E., & Leong, D. (2008). Developing self-regulation in kindergarten: Can we keep all the crickets in the basket? *Young Children*, 63(2), 56–58.
- Braund, H& Timmons, K. (2021). Operationalization of self-regulation in the early years: comparing policy with theoretical underpinnings. *International Journal of Childcare and education Policy*, 1(21). <https://doi.org/10.1186/s40723-021-00085-7>
- Braund, H& Timmons, K. (2021). Operationalization of self-regulation in the early years: comparing policy with theoretical underpinnings. *International Journal of Childcare*.
- Bronson, B. (2000). *Self-regulation in early childhood: Nature and nurture*. New York: Guilford Press.
- Burman, J. T., Green, C. D., & Shanker, S. (2015). On the meanings of self-regulation: Digital humanities in service of con- capital clarity. *Child Development*, 86(5), 1507–1521. <https://doi.org/10.1111/cdev.12395>
- Camerota, M., Willoughby, T. & Blair, B. (2020). Measurement models for studying child executive functioning: questioning the status quo. *Dev. Psychol.* 56, 2236–2245. Doi: 10.1037/dev0001127
- Florez, R. (2016). *Developing Young Children's Self-Regulation through Everyday Experience*, by the National Association for the Education of Young Children. See Permissions and Reprints online at www.naeyc.org/yc/permissions.
- Gomerčić, Lj. & Leipsic, J. (2022). Encouraging self-regulated learning in kindergarten, *International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE)*, 10(2), 111-120.
- Greenberg, M. (2012). The measurement of executive function at age 5: Psychometric properties and relationship to academic achievement. *Psychological Assessment*, 24(1), 226–239. Doi: 10.1037/a0025361

Hadwin, A., & Oshige, M. (2011). Self-regulation, coregulation, and socially shared regulation: Exploring perspectives of social in self-regulated learning theory. *Teachers College Record*, 113(2), 240–264.

Housman, K., Denham, A., & Cabral, H. (2018). Building young children's emotional competence and self-regulation from birth: the begin to ECSEL approach. *Int. J. Emote. Educ.* 10, 5–25.

Kurki, K., Järvenoja, H., Järvelä, S., & Mykkänen, A. (2016). How teachers co-regulate children's emotions and behaviour in socio-emotionally challenging situations in day-care settings. *International Journal of Educational Research*, 76(Complete), 76–88. <https://doi.org/10.1016/j.ijer.2016.02.002>

Mann, D., Hund, M., Hesson, S. & Roman, J. (2017). Pathways to school readiness: executive functioning predicts academic and social-emotional aspects of school readiness. *Mind Brain Educ.* 11, 21–31. Doi: 10.1111/mbe.12134

Maya Rashid Al Sulaimi, Fonny Dameaty Hutaglung, Syed Kamaruzaman Bin Syed Ali,(2022), The Effectiveness of Using Direct Instruction in Teaching Comprehension Skill of Third-Grade Students, *International Journal of Instruction*, 15(2), 374.

McClelland, M. & Cameron, E. (2012). Self-regulation in early childhood: Improving conceptual clarity and developing ecologically valid measures. *Child Development Perspectives*, 6(2), 136–142. <https://doi.org/10.1111/j.1750-8606.2011.00191.x>

McCoy, C. (2019). Measuring young children's executive function and self-regulation in classrooms and other real-world settings. *Clinical Child and Family Psychology Review*, 22(1), 63–74. <https://doi.org/10.1007/s10567-019-00285-1>

Morrison, J., Ponitz, C., & McClelland, M. (2010). *Self-regulation and academic achievement in the transition to school*. In S. D. Calkins & M. Bell (Eds.), *Child development at the intersection of emotion and cognition*, 203–224. Washington, DC: American Psychological Association.

Nahil Abdallah, Odeh Abdallah, Jamal Ahmad Alkilani, (2023). Role of Parents on Children's Prosocial Behaviour at the Public Playground. *International Journal of Instruction*, 16(3), 422.

Nigg, T. (2017). Annual Research Review: On the relations among self-regulation, self-control, executive functioning, effortful control, cognitive control, impulsivity, risk-taking, and inhibition for developmental psychopathology. *Journal of Child Psychology and Psychiatry*, 58(4), 361–383. <https://doi.org/10.1111/jcpp.12675>

Rademacher, A., & Koglin, U. (2019). The concept of self-regulation and preschoolers' social-emotional development: a systematic review. *Early Child Dev. Care* 189, 2299–2317. Doi: 10.1080/03004430.2018.1450251

Robotize, P. (2002). *Motivation and self-regulation in learning*, in *Robotize & Niemi: Theoretical Understanding for Learning in the Virtual University*, Finland: RECE., 37-70.

- Robson, D. A., Allen, M. S., and Howard, S. J. (2020). Self-regulation in childhood as a predictor of future outcomes: a meta-analytic review. *Psychol. Bull.* 146, 324–354. Doi: 10.1037/bul0000227.
- Sezgin, E. (2016). *Investigation of the effect of game-based education on children's behavioural self-regulation skills*. Doctoral thesis. Ankara: Gazi University Institute of Educational Sciences, Ankara. Turkey.
- Shapiro, et al (2004). Effects of internal and External supports on preschool children Event planning, *Journal of Applied Developmental psychology*, 25:33.
- Shin, M. (1997). *The Effects of Self-regulated learning Environments on achievement and Motivation in problem Solving*, Dissertation a submitted to requirements for the degree of Doctor of Philosophy, college of education, the Florida State University, 17.
- Tentolouris, F., (2022). Writing Goals in the Instructional Designs of the Greek Preschool Education. *International Journal of Instruction*. 15(2), 2-3.
- Thomas, L. (2009). *Task orientation*, Retrieved from www.Thomasdynneson.com.
- Timmons, K., Pelletier, J. & Corter, C. (2016). Understanding children's self-regulation within different classroom contexts. *Early Child Development and Care*, 186(2), 249–267. <https://doi.org/10.1080/03004430.2015.1027699>
- Tracy, J. & Graham, S. (2009). Teaching young students' strategies for planning and Drafting Stories: The Impact of self-Regulated strategy. *Development the journal of Education Research*, 102:114.
- Vassilev, E., Neilsen, C., Ehrich, J., Cliff, K., & Howard, J. (2021). *Educator Beliefs Around Supporting Early Self-Regulation: Development and Evaluation of the Self-Regulation Knowledge, Attitudes and Self-Efficacy Scale*. *Frontiers in Education* 6. Retrieved from 5.03.2021. www.naeyc.org/yc/permissions
- Velayudhan, S. (2013). *Influence of psychosocial Classroom Environment on Students' Motivation and self-regulation in science learning*, <http://oatd.org/oatd/record>.
- Violeta, Buza; Arbërore, Bicaj. (2022). Preschool Educators' Preparation on Child. *Assessment Based on Relevant Instruments According to Official Documents*.15(2), 260.
- Werner, M., & Malivalaya, M. (2019). Motivation and self-regulation: The role of want-to motivation in the processes underlying self-regulation and self-control. *Social and Personality Psychology Compass*, 13, Article e12425. <https://doi.org/10.1111/spc3.12425>
- Wolters, C. (2003). Regulation of motivation: Evaluating an underemphasized aspect of self-regulated learning. *Educational Psychologist*, 38(4),40: 47.
- Woodward, L. J., Lu, Z. G., Morris, A. R., & Healey, D. M. (2017). Preschool self-regulation predicts later mental health and educational achievement in very preterm and typically developing children. *Clinical Neuropsychologist*, 31, 404-422. Doi:10.1080/13854046.2016.1251614

World Health Organization, United Nations Children's Fund, World Bank Group (2018). *Nurturing care for early childhood development: A framework for helping children survive and thrive to transform health and human potential*. Geneva: World Health Organization.

Yonghua Peng (2017). *Research on Online Self-Regulation of College Students in English Blended Learning, Proceedings of the 2020 3rd International Seminar on Education*. Research and Social Science (ISERSS 2020).

Yong Jik, Davis, R., & Yue, L. (2023). Korean Pre-service Teachers' Self-efficacy with Online Micro-Teaching Activities in a Teacher Education Program. *International Journal of Instruction*. 16(4), 73.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64–70. [https:// Doi.org/10.1207/s15430421tip4102_2](https://doi.org/10.1207/s15430421tip4102_2).